Managing N twork Data Transf rs in a Virtual Comput r Syst m

ABSTRACT OF THE DISCLOSURE

A virtual computer system, including one or more virtual machines (VMs), is connected to a computer network by multiple network interface cards (NICs). The VMs are supported by a kernel, which includes a resource manager for allocating system resources among the VMs, including network data bandwidth. A NIC manager is loaded into the kernel as a driver or is integrated into the kernel, for selecting NICs over which outgoing network data is transferred, including providing functions such as failovers and failbacks, as well as load distribution. Implementing the NIC manager in the kernel provides NIC teaming functions to each of the VMs without having to implement a NIC teaming solution in each of the VMs, adding to the simplicity, flexibility and portability of the VMs. In addition, integrating the NIC manager into the kernel improves the kernel's ability to manage the VMs and to implement network resource allocations for the VMs.